

REMARKS/ARGUMENTS

Upon entry of the present amendment, claims 110-127 will be pending in this application and are presented for examination. Claims 1-109 remain canceled. Claims 110, 111 and 116 have been amended. Support for the amendment to claims 110-111 is found, for example, on page 41, lines 3-8 and in U.S. Patent No. 5,556,749, which is incorporated by reference therein. Support for the amendment to claim 116 is found in previously filed claim 114. No new matter has been introduced. Reconsideration of the rejected claims is respectfully requested.

I. Priority

A. The Examiner has objected to the statement of priority claim in an amendment filed on September 26, 2003 because the amendment to the specification details priority to seven applications, but the application data sheet filed on the same day lists only one application. To perfect the claim for priority, Applicants have amended the specification to include all eight applications claimed under 35 U.S.C. §120. In addition, Applicants have attached a supplemental application data sheet (ADS) including all eight applications to be filed concurrently with the response. In view of the amendments to the specification and the filing of a supplemental ADS, Applicants respectfully request that the objection to the statement of priority be withdrawn.

B. The Examiner has noted that the priority claims filed on September 26, 2003 contain the CIP of Application Nos. 09/640,953 or 09/431,385 that lack copendency with the instant application. In response, Applicants have amended the priority claims. In view of the amendments, Applicants believe that the priority claims are proper. Applicants respectfully request the objection to the priority claims be withdrawn.

C. The Examiner has denied the granting of benefit of the claimed priority to the claimed prior Application Nos. 60/186,046, 09/640,953, 09/054,832, 09/431,385 and 09/054,830 alleged that these prior applications do not disclose the nearest-neighbor methods for calculation of melting temperatures or duplex stability as recited in the instant claimed invention.

Applicants do not acquiesce with the Examiner, however, in the interest of furthering the prosecution, Applicants will respond the cited prior art references having a reference date after the earliest priority date of April 3, 1998 filing date of application 09/054,830, but before the November 28, 2000 filing date of application 09/724,959.

II. Rejection of Claims 110-127 under 35 U.S.C. § 101

Claims 110-127 have been rejected 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The Examiner alleges that the instant claims are drawn to computational means and do not produce a real-world result. In response, Applicants have amended the claims according to the Examiner's suggestions. In view of the amendments, Applicants believe that the rejection is overcome. Accordingly, Applicants respectfully request the rejection be withdrawn.

III. Rejection of Claims 110-127 under 35 U.S.C. § 112, Second Paragraph

Claims 110-127 have been rejected under 35 U.S.C. § 112, second Paragraph as allegedly being indefinite. To the extent that the rejection is applicable to the amended set of claims, Applicants respectfully traverse the rejection.

Applicants have amended claims 110 and 111 according to the Examiner's suggestion by reciting "outputting a sequence to a user or a display", a step that produces a tangible result. Applicants have also amended claims 110 and 111 by deleting the term "unsubstituted pyrimidines" from the definition of modified base. Claim 116 has been amended to recite "the modified base is attached to a locked nucleic acid sugar".

In view of the amendment and comments above, Applicants submit that claims 110-127 are definite within the meaning of 35 U.S.C. § 112, second paragraph and respectfully request that this rejection be withdrawn.

IV. Rejection of Claims 110, 114, 115 and 123 under 35 U.S.C. § 102(b)

Claims 110, 114, 115 and 123 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Griffin *et al.*, *Analytical Biochemistry*, 1998, 260, 56-63 (hereinafter "Griffin"). To the extent that the rejection is applicable to the amended set of claims, Applicants respectfully traverse the rejection.

As set forth in MPEP 2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Griffin discloses a method for predicting the stability of peptide nucleic acid (PNA):DNA duplexes using nearest neighbor models, wherein the duplexes have ***unmodified natural bases*** (see, page 56, column 2, third paragraph and page 57, column 1, third paragraph of Griffin). Griffin fails to disclose a method for designing an oligonucleotide, wherein at least one base is a modified base selected from the group of universal bases, unsubstituted and 3-substituted pyrazolo[3,4-d]pyrimidines and 5-substituted pyrimidines as recited in amended claims 110 and 111. Independent claim 111 also recites an additional element wherein the oligonucleotide comprises a minor groove binder (MGB). Therefore, Griffin fails to teach each and every element of independent claims 110 and 111, or the claims depending from claims 110 and 111. Accordingly, Applicants respectfully request that the rejection of claims 110, 114, 115 and 123 under 35 U.S.C. § 102(b) be withdrawn.

V. Double Patenting Rejection

Claims 110-113 and 118-122 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being obvious over claims 1-2, 6-9, and 24-25 of copending Application No. 10/176,972. Applicants respectfully request that this provisional rejection be held in abeyance until the present subject matter is found allowable. Should the Examiner feel that the amended claims remain subject to the provisional rejection, Applicants will file a terminal disclaimer.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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